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SOME REFLECTIONS ON INCOME DISTRIBUTION AND POVERTY IN SOME ASIAN COUNTRIES*

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I. INTRODUCTION

It is now becoming increasingly evident that increased inequalities and impoverishment can co-obtain with growth in GNP; there are, indeed, some exceptions to this but it is recognized that the typical pattern is one of growing inequalities and continued impoverishment. It is the aim of this paper to briefly survey the evidence on this with respect to some Asian countries and argue that the roots of this phenomenon lie in the very character of growth that is pursued in these countries. We shall then go on to discuss the viability of some of the policies suggested to reduce inequality and poverty; it will be argued that these policies cannot be expected to be successful unless a significant departure from the prevalent framework is envisaged. In conducting this argument we shall draw from the experience of one Asian country or the other but no attempt will be made to do a comprehensive statistical survey of all the Asian countries in relation to the various aspects raised - a task much beyond our competence and scope.

II. THE DEGREE OF INEQUALITY AND ABSOLUTE POVERTY IN THE ASIAN COUNTRIES

It is perhaps useful to start off by making some preliminary remarks on what we mean by inequality and poverty. We use the word "inequality" in the relative sense where as the word "poverty" is used in the absolute sense. When, for example, we say that the Kuznets' hypothesis predicts that inequalities will increase in the initial stages of development, acceptance of this does not imply that we also predict increases in "poverty"; inequalities may rise without a rise in poverty and vice versa. It is rather crucial to keep this distinction in mind as changes in one seem to be often confused as evidence for changes in the other.

Inequality and poverty are also thought of here as having many dimensions - there are in principle as many dimensions to it as to human living. It is now widely recognized that "income" or "consumption" per head cannot capture all these dimensions because there are many aspects of human living which are beyond the market and which cannot be priced in any rational sense. An attempt will be made, therefore, to consider inequalities and poverty in as many relevant respects as we can.

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III. THE EVIDENCE

Table 1 enumerates some evidence on the extent of inequalities and poverty in some of the Asian countries taken from a compilation of the World Bank. It throws up some interesting facts:

a) Infant mortality rate, which is often a sensitive indicator of the extent of poverty, was very high in several of the Asian countries - in 1970, it was as high as 182 per thousand in Afghanistan, 140 in Bangladesh, 130 in India. In general, the rates seem to be low in the east Asian countries than in South Asian countries.

b) The adult literacy rate was still very low in several countries - 10 per cent in Afghanistan, 14 per cent in Nepal, 31 per cent in Thailand, for example.

c) Interestingly, the number of countries whose per capita supply of calories falls short of the requirements was below, say, 95 per cent were Afghanistan, Indonesia, Nepal, India, Philippines, Malaysia out of the 13 countries for which data was shown in the table.

d) Out of the 6 countries for which data is available for both the years the per cent of income received by the lowest 20 per cent has improved in four cases and worsened in two cases; it is not clear, however, that these statistics refer to shares in real income, and also adjust for inter-country differences in the relatives prices of essential consumer goods to other goods. These can be taken as indicative of broad magnitudes; (we shall have occasion to refer to other supplementary evidence shortly).

e) In almost all respects of indicators of absolute poverty - dwellings with piped water, access to electricity, population per physician etc. - East Asia seems to have much lower levels of poverty than South Asia.

All these facts can be taken to indicate the degree of inequality and poverty persisting in the Asian countries. But, admittedly, one can rely much less on them in deciding whether inequalities and poverty have increased or decreased through time. It is, therefore, useful to see what other evidence there is on this question.

/Table 1.

Table 1. Some selected indicators of poverty and inequality in some Asian countries

Unemployed, % 1970	Dependency ratio 1970	Per cent of income received by the lowest 20 %		Population per physician 1970	Per capita calorie supply % of requirement 1970	Per capita protein supply grammes per day 1970	Adult literacy rate 1970	% of occupied dwellings without piped water, 1970	Access to electricity % of total dwellings 1970	Electric power consumption kWh per capita, 1970	Newsprint consumption per capita kg per year, 1970
		1960	1970								
8.0	1.5	-	-	20,450	80	58	10	-	-	20	-
-	1.5	-	-	7,600	-	-	-	-	-	11	-
-	1.1	6.0	-	8,970	103	49	70	-	-	23	0.6
-	1.5	-	-	27,650	89	43	56	-	-	19	0.2
-	1.2	-	-	49,770	93	52	14	-	-	6	-
-	1.2	4.0	5.0	4,800	93	53	36	-	-	111	0.3
-	1.6	7.0	8.0	3,800	99	59	-	-	-	108	0.3
11.0	1.4	5.0	7.0	3,690	107	50	85	96	9	65	1.1
-	1.1	-	-	7,970	105	52	-	-	17	106	1.2
5.0	1.4	7.0	10.0	2,210	103	65	91	80	50	308	3.4
7.0	1,3	5.0	4.0	9,100	85	45	72	66	23	229	1.8
6.0	1.6	-	6.0	2,120	-	-	-	-	-	304	1.5
6.0	1.6	6.5	3.4	3,860	94	49	89	65	43	366	4.0
10.0	1.3	-	-	1,520	103	63	75	20	87	1,063	10.4
-	1.5	6.7	-	6,602	99	54	37	-	-	31	0.6
5.7	1.4	-	-	4,415	103	55	75	57	49	239	2.4

s, 1976 (1976).

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Table 1. Some selected indicators of poverty and inequality in some Asian countries

Country	Infant mortality rate 1970	% of labour force in agriculture 1970	Unemployed, % 1970	Dependency ratio 1970	Per cent of income received by the lowest 20 % 1960	Per cent of income received by the lowest 20 % 1970	Population per physician 1970	Per capita calorie supply % of requirement 1970	Per capita protein supply grammes per day 1970	Adult literacy rate 1970	% of occupied dwellings without piped water, 1970	Access to electricity % of total dwellings 1970	Electric power consumption kWh per capita, 1970	Newsprint consumption per capita kg per year, 1970
Group 1 ($100 and below)														
Afghanistan	182	67	8.0	1.5	-	-	20,450	80	58	10	-	-	20	-
Bangladesh	140	71	-	1.5	-	-	7,600	-	-	-	-	-	11	-
Burma	139	70	-	1.1	6.0	-	8,970	103	49	70	-	-	23	0.6
Indonesia	135	63	-	1.5	-	-	27,650	89	43	56	-	-	19	0.2
Nepal	-	94	-	1.2	-	-	49,770	93	52	14	-	-	6	-
Group 2 ($101-$200)														
India	130	71	-	1.2	4.0	5.0	4,800	93	53	36	-	-	111	0.3
Pakistan	115	58	-	1.6	7.0	8.0	3,800	99	59	-	-	-	108	0.3
Sri Lanka	50	52	11.0	1.4	5.0	7.0	3,690	107	50	85	96	9	65	1.1
Thailand	80	79	-	1.1	-	-	7,970	105	52	-	-	17	106	1.2
Group 3 ($201-$375)														
Republic of Korea	-	50	5.0	1.4	7.0	10.0	2,210	103	65	91	80	50	308	3.4
Philippines	80	56	7.0	1.3	5.0	4.0	9,100	85	45	72	66	23	229	1.8
Group 4 ($376-$1,000)														
Fiji	19	52	6.0	1.6	-	6.0	2,120	-	-	-	-	-	304	1.5
Malaysia	41	47	6.0	1.6	6.5	3.4	3,860	94	49	89	65	43	366	4.0
Singapore	20	3	10.0	1.3	-	-	1,520	103	63	75	20	87	1,063	10.4
Regional classification														
South Asia	130	66	-	1.5	6.7	-	6,602	99	54	37	-	-	31	0.6
East Asia	71	59	5.7	1.4	-	-	4,415	103	55	75	57	49	239	2.4

Source: World Bank, World Tables, 1976 (1976).

/A

A study of the trends in the relative and absolute incomes of the rural poor in seven Asian countries[1/] - viz., Bangladesh, India, Indonesia, Malaysia, Pakistan, Philippines and Sri Lanka - suggests that the shares of the lower decile groups in aggregate income and consumption have been declining even during periods of relatively rapid agricultural growth. There are significant differences from country to country as regards the proportion of its population that has been adversely affected, but in each country for which we have data, a substantial proportion of the lowest income groups appears to have experiences a decline in their share of real income over time.

"Indeed, the evidence from case studies points to an even stronger conclusion. In almost every case a significant proportion of low-income households experienced an absolute decline in their real income, particularly since the early 1960s." Further, "in six of the eight cases in which poverty lines were constructed, the proportion of the rural population in poverty seems to have increased, although in Philippines the increase was modest. In Pakistan and Tamilnadu in contrast, the proportion of people in poverty has remained roughly constant" (see table 2).

Among these eight case studies - which consist of four states from India and Pakistan, Bangladesh, Malaysia and the Philippines - there are areas where the Green Revolution has had a significant impact, like the state of Punjab in India. But, according to this study, the proportion of population in poverty has increased from 18 per cent in 1960-61 (a pre-Green Revolution year) to 23 per cent in 1970-71 (a post-Green Revolution year) - a finding which is highly disturbing (see table 2).

Attempts to study the trends in the distribution of income, consumer expenditure and assets of households with respect to India as a whole have not resulted in definite conclusions; studies by various authors seem to indicate a near constancy in the Gini ratios with respect to these variables.[2/] It is recognized, however, that there are systematic biases and problems in estimating

/Table 2.

1/ This is the most of the various comprehensive surveys undertaken on this subject - see K. Griffin and A.R. Khan, 1978. We have relied on this to a large extent for the evidence on the trends in inequality and poverty.

2/ For a recent survey of the evidence, see Uma Datta Roy Choudhury, 1977; also, T.N. Srinivasan and P.K. Bardhan (ed.), 1974, for a wide ranging discussion of various aspects of this question.

Table 2. Percentage of the rural population below the poverty line

Country or state	Year	Rural population in poverty		
		A	B	C
Pakistan	1963-64	72	54	45
	1966-67	64	52	44
	1968-69	64	53	46
	1969-70	68	46	36
	1970-71	71	47	38
	1971-72	74	55	43
Punjab, India	1960-61	18		
	1970-71	23		
Uttar Pradesh, India	1960-61	42		
	1970-71	64		
Bihar, India	1960-61	41		
	1963-64	54		
	1964-65	53		
	1970-71	59		
Tamil Nadu, India	1957-58	74	53	
	1959-60	79	54	
	1960-61	70	48	
	1961-62	66	36	
	1963-64	64	39	
	1964-65	72	46	
	1969-70	74	49	
Bangladesh	1963-64	40	5	
	1968-69	76	25	
	1973-74	79	42	
	1975	62	41	
Malaysia	1957	40		
	1970	47		
Philippines	1956-57	10		
	1961	12		
	1965	13		
	1970-71	12		

Source: The data were obtained from various chapters in Keith Griffin and Azizur Rahman Khan (eds.), op. cit., or, in the case of Malaysia and the Philippines, were derived from interpolations of data continaed in that volume.

Notes: (1) The data refer to the proportion of the rural population in poverty, except in the case of Malaysia and the Philippines, where the data refer to households.

(2) The poverty lines are defined as follows:

Pakistan: Income sufficient to yield food consumption satisfying 95 per cent of the estimated caloric requirements (estimate A), or 92 per cent (estimate B) or 90 per cent (estimate C); Punjab: Rs 16.36 per capita per month in 1960-61 prices; Uttar Pradesh: Rs 14.50 per capita per month in 1960-61 prices; Bihar: Rs 15.83 per capita per month in 1960-61 prices; Tamil Nadu:

/Table 2 (continued)

Table 2 (continued)

Notes (continued):

Rs 21 per capita per month in 1960-61 prices (estimate A) or Rs 15 per capita per month (estimate B); Bangladesh: Tk 23.61 per capita per month in 1963-64 prices, corresponding to a level of income sufficient to yield food consumption satisfying 90 per cent of the estimated caloric requirements (estimate A) or Tk 17.02, corresponding to an income satisfying 80 per cent of caloric requirements; Malaysia: 97.4 Malaysian dollars per household per month at 1965 prices; Philippines: 434 pesos per family per year at 1965 prices; the reader is warned that these interpolations are tentative.

(Note by the author: This table is reproduced from Griffin and Khan, 1978.)

/these

these trends based on the consumer expenditure surveys, which are the primary sources for these studies. First, it is generally recognized that there may be an underestimation of consumption expenditure in the upper ranges of the households; second, the rate at which prices have increased have affected the different social groups differentially, as it is generally recognized that the prices of essential consumer goods have increased faster than the others. Given these basic problems, one might quote some results which are perhaps indicative. First, it is observed that in 1960s, there is a general fall in *per capita* real consumption expenditure in all fractile groups of rural areas:[3] this could be taken to indicate that whether inequality has increased or not, there may have been a rise in the proportion of people in poverty. Indeed, a study which tries to correct for differential price increases with respect to the poor in rural areas estimates that the proportion of people in poverty might have increased from 38 per cent in 1960/61 to 54 per cent in 1968/69.[4]

There seems to be less doubt regarding the movements in the distribution of income and assets in rural India - see table 3 which presents some of the most informed estimates available on the changes in the concentration ratios of these variables. Apart from indicating that the concentration ratios of income or assets are usually higher than those of consumer expenditure - nominal or real - they also seems to indicate either a near constancy or a rise in these ratios.[5] If one accepts that, on the one hand, there may have been a rise in the proportion of people in poverty (who dissave rather than save) and that, on the other hand, there has been a rise in *per capita* output in the 1960s, then, the picture of a rising inequality in income and assets is consistent with absolute impoverishment. Some studies of income distribution movements in Indonesia argued that both inequality as well as poverty have declined in recent years. A more detailed study[6] seems to indicate, however, that while the proportion of the population below the poverty line has decreased marginally (by 1.4 per cent of

/Table 3.

3/ See Uma Datta Roy Choudhary, 1977, p. 1711. This is based on the information collected by the National Sample Survey Organization of India; some scholars believe that this statistic might imply that the statistics are in general underestimates of the consumption; unless we believe that this is increasingly so, it could be taken as indicating the trends.

4/ See P.K. Bardhan, 1974.

5/ See also, R.P. Pathak, *et al.*, 1977, in this context.

6/ See B. White, 1979, for a survey of the evidence on this question.

Table 3. Concentration ratio of household income, consumption and asset holding: rural India

Period	Income	Consumer expenditure		Asset holding
		At current prices	At 1960-61 prices	
(1)	(2)	(3)	(4)	(5)
1953-54	-	0.334	-	-
1953-55	0.343	-	-	-
1956-57	-	0.310	-	-
1957-58	-	0.334	0.321	-
1958-59	-	0.321	0.305	-
1961-62	0.410	0.312	0.300	0.650
1963-64	-	0.297	0.286	-
1964-65	-	0.294	0.291	-
1963-65	0.324	-	-	-
1967-68	-	0.293	0.297	-
1968-69	0.430	-	-	-
1970-71	-	0.272	-	-
1971-72	-	-	-	0.660

(Note by the author: This table is reproduced from Uma Datta Roy Choudhury, 1977.)

/the

the total population) between 1970 and 1976, the proportion of the very poor and the destitute has increased - suggesting that a measure of poverty which gave weights to the depth of poverty (as, for example, that advocated by Amartya Sen)[7/] would have shown a rise. Thus the evidence on Indonesia seems to corroborate the findings of Griffin and Khan, quoted earlier.

A study on the long-term trends in income distribution in Pakistan (N.L. Hicks, 1978) suggests that while it has probably improved in the 1960s, it may have worsened since then. From a close examination of the data, the author argues that income distribution may have worsened in Pakistan during periods of slow growth (the 1950s and the 1970s) and may have improved when the growth was better (the 1960s). If this is the case, Pakistan differs from the experience of some other Asian countries where income distribution seems to have worsened even in periods of growth.

In contrast to these cases, however, where the experience is one of predominantly rising poverty and inequality, there seems to be some instances where studies indicate that poverty and inequality may have declined; these instances are, however, confined to countries which are relatively small in population size and which enjoyed export-led growth - e.g., Korea.[8/] We shall consider these as instances of contrasting experience and discuss towards the later part of this paper, after examining the reasons for growing poverty and inequality in the other countries.

Given that the predominant experience is one of growing inequality and further impoverishment in Asia,[9/] even when GNP was growing, what explains such an experience? The traditional Kuznets hypothesis,[10/] which may be considered to refer to the behaviour of inequalities, may not be sufficient to understand increasing impoverishment. We seem to need something more than the Kuznets' hypothesis to understand impoverishment.

In what follows, we shall argue that increasing inequalities and further impoverishment are a consequence of the very type of growth pursued in these

/countries.

7/ See Amarya Sen, 1974.
8/ See D.C. Rao, 1978; also, Paul Streeten, 1978.
9/ See Griffin and Khan, op.cit.
10/ For a discussion of the Kuznets hypothesis, see Montek Ahluwalia, 1976.

countries. We shall do this mainly drawing from the experience of India, as an example par excellence of this type of phenomenon

IV. THE ROLE OF THE AGRICULTURAL SECTOR

It can be argued that many facets of the experience relating to inequality and impoverishment are largely explicable in terms of the character of agricultural growth that obtained in these countries.

India: In India, the rate of agricultural growth was estimated to be at about 2.46 per cent per year in the period 1952/53 to 1976/77; the growth rate of foodgrain output was 2.39 - which was higher than the rate of growth of population during this period.[11/] Yet, the proportion of the population in poverty had gone up.

One could argue that this was because the growth of food output was obtained mainly via the adoption of the HYVs in the later part of the period. Such growth, however, was limited by the availability of irrigation; it called for significant increases in investments in inputs other than labour; called for a degree of risk taking. These characteristics have resulted in a type of growth where it was limited to some areas and confined to some classes.

While one can, in some pure sense, argue that the HYV technology is scale neutral it cannot be disputed that it calls for assured and controlled irrigation and significantly larger doses of chemical fertilizer; it calls for larger resources both in terms of the fixed as well as working capital. It is in this non-technological sense that it becomes scale biased and favours the rich farmers; as a result the rich farmers do better than the small farmers under HYV technology. One scholar who has studied this problem at length has, for example, concluded that "..... on balance HYVs have almost certainly increased disparities between large and small farmers" (M. Lipton, 1978).

In India, for example, there is increasing evidence that access to inputs is heavily biased in favour of the richer farmers;[12/] and that this is much more so with respect to rice than wheat. And that in the recent period, private investment

/in

11/ G.V.K. Rao and R. Thamarajakshi, 1978.

12/ For a good survey of literature in this context, see M. Lipton, 1978; also, Biplab Dasgupta, 1977, for a comprehensive discussion of the Green Revolution.

in irrigation played a much more dynamic role in agriculture than the public investment,[13] with the result that agricultural growth came to be predominantly confined to areas where there is a class of rich farmers who have the opportunity to exploit ground irrigation potential and who are in a position to grow wheat.[14] The result was that agricultural growth came to be confined to a small narrow region of the country; the rest of the region has even experienced negative growth. A study on the geographical incidence of growth in India, for example, concluded that, "Over the period 1962-1965 to 1970-1973, 212 districts showed positive growth rates of agricultural output, while 70 districts showed negative growth rates.... In fact, districts covering more than half the area of the country have agricultural growth rates below 1.5 per cent - well below the rate of population growth.

"A major problem has been that nearly two-thirds of the area under rice has had either a negative rate of growth of output or one below the rate of population growth.... By way of contrast, the vast majority of wheat growing areas enjoyed substantial positive rates of growth..." (Bhalla, Sheila, 1977).[15] In fact out of a total 282 districts studied, only 48 had experienced a growth rate above 4.5 per cent a year: these were the districts which provided the predominant part of the increment in output.

As said earlier, the particular type of agricultural growth did not only mean that regional disparities have widened;[16] it is also much more acutely reflected in the distribution of incomes between households. Based on a study of two districts in India where the Green Revolution had taken place, viz., Ferozepur (Punjab) and Muzaffarnagar (Uttar Pradesh), an author has concluded that the inequalities in disposable income (gross output minus paid out

/costs)

13/ For an explanation of agricultural growth in the recent period, see Yechuri Sitaram, 1976; on the importance of public investment in explaining growth in the pre-Green Revolution period, see S.K. Rao, 1971.

14/ See P. Patnaik, 1975.

15/ See pp. 1368-9.

16/ During 1975-76, for example, the top three states in India contributed 37 per cent of total foodgrain output; see C.H. Hanumantha Rao, 1977, p. 1370.

costs) have increased with the onset of the Green Revolution.[17] There are a number of other studies which also indicate the same result.[18]

When we are discussing the inequality in the distribution of incomes, however, it is worthwhile distinguishing at least two separate aspects of the matter, viz., (a) the distribution of incomes between the small and the big farmers, and (b) the incomes of the land owners vs the incomes of the landless people. It is sometimes thought that while small farmers may not gain to the same extent as the big farmers, the increased output at least partly goes to the small farmers too. The expectation, then, is that the adoption of the HYVs, while contributing to increased disparities, may not explain absolute impoverishment insofar as the small farmers vs big farmers are concerned. The explanation for the impoverishment is sought in terms of what happened to the class of agricultural labourers who depend on employment for their livelihood.

In this context, it is perhaps useful to distinguish between what happened in the areas where there was comparatively high growth and the areas where there was little or negative growth.

a) In areas where there was little growth - for example, the districts in India where the growth of output was less than the rate of growth of population - it is not surprising that there was absolute impoverishment. This could have been avoided only if there could have been rapid growth of money income from other sources or from fiscal transfers. As we shall see later, there is no basis to believe that there was such compensatory movements nor any redistribution of income within these areas in favour of the poorer sections.

b) In areas where there was comparatively rapid growth of agricultural output, while there may have been no absolute impoverishment of the small farmer class, the other classes do not seem to have done so well. The evidence

/on

17/ See G.R. Saini, 1976. For a survey of evidence, see also, S.L. Shetty, 1978.

18/ After a careful scrutiny of evidence, Shetty concludes: "... there is by now a consensus that agricultural development since the mid sixties has led to a widening of income disparities between regions, between small and big farms, and between land owners and landless labourers...", p. 210.

on the growth of employment and real agricultural wage rates is somewhat uncertain, but on the whole inclining one to believe that mechanization coupled with inflation in the prices of necessities may have eaten away whatever initial gains there might have been with respect to them.[19/] There is also some evidence to show that there may have been eviction of tenants forcing small farmer tenants into the ranks of agricultural labourers.

A study on the movements in the real wage income of the agricultural labour households in different states of India in the post-Green Revolution period suggests that in the majority of states it has declined (see table 4); only in three out of the fourteen states for which data was shown recorded a rise.

While it may be difficult to have more conclusive evidence on the movements in the real wage incomes of the agricultural labour households, there is some evidence to suggest that the proportion of the landless may have been rising in India. Data from the population censuses show that the proportion of male agricultural labourers in the total rural population increased from 15 per cent in 1961 to 25 per cent in 1971; that of cultivators went down from 62 to 56 per cent in the same period.[20/] There is some dispute whether such a rise was because of dispossession of land[21/] or due to other causes - but it seems to be largely agreed upon that there was a rise in the proportion of the landless.

The upshot of the evidence, then, is that what growth there was confined to a small class of rich farmers in limited geographical areas; as a result, there was increased inequality as well as impoverishment in large parts of India.

/Table 4.

19/ See Shetty, op.cit.; he concludes, "the beneficial employment effects of new farm technology in totality is doubtful; and some of the recent evidence would suggest that again since 1970/71, real wages of farm labourers have tended to decline even in Punjab, Haryana and Western Uttar Pradesh".(p. 210).

20/ See V.S. Vyas, 1976.

21/ See Dalip S. Swamy, 1976, for an argument that the increase in the proportion of the landless was because of dispossession of land.

Table 4. Compound rates of growth of aggregate agricultural production (A) and indices of increase in (i) consumer price index numbers of agricultural labourers (B); (ii) real income from wage employment (C); and (iii) total real income (D) of agricultural labour households; (iv) per capita real income from wage employment (E); and (v) per capita total real income (F) of agricultural labourers in different states between 1963-64 and 1970-71

(Index for 1963-64 = 100)

	(A) (in percentages)		(B)	(C)	(D)	(E)	(F)
	1957-58 to 1963-64	1963-64 to 1971-72					
Andhra Pradesh	2.63	-0.23	164	66	86	71	93
Assam	0.88	2.86	178	69	85	70	87
Bihar	5.37	2.57	175	78	85	91	99
Gujarat	6.46	1.93	163	74	87	86	101
Karnataka	3.22	2.49	172	83	94	91	103
Kerala	2.20	3.79	195	97	97	107	107
Madhya Pradesh	1.96	1.66	166	117	130	127	140
Maharashtra	1.25	-3.66	173	87	95	89	98
Orissa	5.74	0.56	161	70	84	86	102
Punjab Haryana	3.13	7.48	170	102	161	114	181
Rajasthan	1.70	4.65	168	34	53	40	64
Tamil Nadu	3.37	2.68	141	112	113	124	125
Uttar Pradesh	3.21	3.53	146	99	153	111	171
West Bengal	4.32	2.80	157	-	-	-	-

Sources: (A) From A.V. Jose, "Growth and fluctuation in Indian agriculture: 1955-56 to 1972-73", Working Paper No. 58, Centre for Development Studies, Trivandrum (1977).

(B) From Statistical Abstract of the Indian Union 1972 (Government of India). The methodology used for estimating the index numbers for Uttar Pradesh and Tamil Nadu in 1963-64 is discussed in A.V. Jose (1974), op. cit.

(C) and (D) worked out from figures given in Annexure 5.2. Rural Labour Enquiry and Tables 12 and 13 in NSS 25th Round, Report No. 262 (Government of India).

(E) and (F) The per capita income figures were estimated by dividing the annual income of the household by the respective size of household (source for 1963-64: table 2.5, Rural Labour Enquiry; and for 1970-71, table 5.4, NSS Report No. 257) in both the reference years and the index numbers were worked out.

(Note by the author: This table is reproduced from A.V. Jose, 1978.)

/V.

V. THE BALANCE OF FOOD SUPPLY

Yet the surprising thing, however, was that the over-all food output was growing faster than the population in India. If imbalance in agricultural growth might explain why some regions and some classes find themselves in a disadvantaged position to start with, and which is not corrected by compensatory movements in other areas, the question arises: how was this food output absorbed?[22/] What was happening to the increased food production that was not obviously going to feed the vast majority of the populations in these countries?

Again, the experience of India was instructive in this regard. The increased food output seems to have been absorbed in two fashions: first, there must have been increased consumption of food by the classes who experienced growth of incomes; second, that it was held as stocks or exported.

Table 5 shows an official estimate of the total consumption of food per household during 1971/72, converted into equivalent calories. It shows what has been the average calories intake per household in different states of India, and what proportion of households in each state consume what may be considered as the minimum caloric requirement, viz., 2700 calories per person per day. This study shows that: a) the average calorie and protein intake per consumer unit (in India as a whole) was 2719 calories and 77 grams respectively; while the average calorie intake falls short of the minimum required level of 2750 units marginally, the level of protein consumption was above what was thought to be the necessary minimum. "Thus the estimates show that the total food used for domestic consumption could provide the nearly minimum energy requirement for the population as a whole" (EPW, January 13, 1979, p. 65). b) At the same time it was found that the proportion of households below the required level of calorie intake was estimated at 49 per cent in the rural and 56 per cent in the urban areas of the country. c) It was generally the case that the proportion of the households below the required level of consumption was lower where the average intake was higher.

It is clear that there must be overconsumption of food in certain households; what is interesting, however, is that the relationship between level of household expenditure and per capita intake of calories seems to

/Table 5.

22/ Some scholars have argued that, given that the demand for food grains is not very elastic or that the saturation levels are reached after a point (nearly above the level of requirement?), the rising per capita food supply should indicate a decline in the proportion of people in poverty; see, for a discussion of this point, S.L. Shetty, 1978, p. 212.

Table 5. Total consumption of food per household during 1971-72

(1)	Rural			Rural		
	Percentage of households consuming less than 2,700 cals. (2)	Intake of calories		Percentage of households consuming less than 2,700 cals. (5)	Intake of calories	
		Median* (3)	Mean (4)		Median* (6)	Mean (7)
1. Andhra Pradesh	54	2,588	2,666	61	2,508	2,617
2. Assam	55	2,605	2,665	55	2,626	2,616
3. Bihar	51	2,667	2,732	44	2,814	2,763
4. Gujarat	45	2,840	2,822	53	2,641	2,625
5. Haryana	22	3,450	3,652	45	2,820	2,789
6. Himachal Pradesh	33	3,038	3,190	38	2,946	2,823
7. Jammu and Kashmir	13	3,419	3,490	44	2,789	2,772
8. Kerala	74	1,928	2,023	67	2,113	2,103
9. Madhya Pradesh	37	3,101	3,536	46	2,780	2,850
10. Maharashtra	59	2,514	2,567	59	2,539	2,502
11. Meghalaya	61	2,587	2,577	52	2,669	2,623
12. Mysore	51	2,678	2,839	63	2,432	2,372
13. Orissa	57	2,516	2,533	46	2,778	2,737
14. Punjab	27	3,437	3,711	40	2,959	2,806
15. Rajasthan	38	3,092	3,213	42	2,899	3,006
16. Tamil Nadu	64	2,295	2,394	68	2,293	2,239
17. Uttar Pradesh	32	3,180	3,198	50	2,697	2,616
18. West Bengal	71	2,250	2,311	61	2,551	2,451
19. Delhi	34	2,935	3,040	53	2,651	2,579
20. Goa. Daman and Diu	58	2,553	2,350	54	2,622	2,614
21. Manipur	39	2,941	3,109	34	2,985	2,948
22. Pondicherry	66	2,343	2,321	56	2,533	2,410
23. Tripura	47	2,751	3,027	51	2,691	2,857
24. All-India	49	2,730	2,724	56	2,584	2,699

Note: *Computed by applying Lagrange's interpolation formula to three consecutive cumulative percentages of households by per consumer unit per day calorie intake groups.

(Note by the author: This table is reproduced from EPW, "Levels of food consumption", 13 January 1979.

/be

be a fairly elastic one - contrary to the expectation that once a certain threshold is crossed, intake of calories may level off.[23/] This gives ground to the possibility that as incomes rise even in the case of households which are already prosperous, their consumption of food might also rise considerably. That is to say, the actual food consumption behaviour is not one where it rises significantly only in the sub-requirement ranges, levelling off after that: rather it is one where it could rise significantly even in respect of households which are already in the above-requirement range. This suggests that part of the incremental output in food, whose growth is concentrated classwise and regionwise, could have been absorbed in those groups themselves.[24/]

There is also some evidence to show that it is not per capita income alone which determines the per capita consumption of food; it seems to be also significantly determined by the extent to which food output is produced locally - a phenomenon which could be explained in terms of the access to food as well as the possibility for self consumption by the producers of food. The degree of equality in land ownership is a significant variable affecting the access to output for self consumption.[25/]

It is clear, then, that there are some factors which adduce for larger consumption in the areas where growth is marked and a denial of consumption in areas where the growth of foodgrain production is sluggish. Apart from this imbalance in consumption associated with the imbalance in growth, another explanation for the continued impoverishment and increased inequality is the increased stockholding of foodgrains when the market demand has failed. This has become a significant feature in India in recent years where the price support programme of the government has led to considerable of accumulation of foodgrains amounting to more than 10 per cent of annual output. It can be argued further that the increased liquidity of the surplus farmers, which the state buying-operation in times of slack demand results in, has enabled them to hold on to stocks of other items in critical supply, e.g., pulses, accentuating the difficulties from the point of view of the consumer.[26/] A tendency to consider foodgrains as an export item has also emerged.

/VI.

23/ Data presented in K.S. Krishna, 1978, seem to support such a surmise.

24/ See, also, in this context Joan P. Mencher, 1978; and P.G.K. Panikkar, 1978, on the extent of malnutrition among agricultural labour households in Kerala.

25/ See, United Nations, 1975.

26/ See, SKR and AS, 1975; and also S.K. Rao, 1978.

VI. CHANGES IN THE TERMS OF TRADE

A related factor to the character of agricultural growth in explaining the increased degree of inequality and impoverishment is the phenomenon of the relatively larger increase in the prices of foodgrains compared to other prices.[27/] A larger increase in foodgrain prices tends to nullify whatever gains there may be in the distribution of money incomes as they cut into the living standards of the poorer sections of the population to a greater extent.[28/] It is known that the market dependence for foodgrains is acute not only with respect to the agricultural labourers - who often might find themselves paid in cash rather in kind as foodgrain prices rise - but also with respect to the small farmer class.[29/] The small farmers, even if in principle produce enough to equal their consumption, are often forced to sell immediately after harvest to meet the needs of repayment of debt and other cash commitments; and then purchase foodgrains again at higher prices before the harvest. What might be a favourable movement in the terms of trade from the point of view of the agricultural sector could prove to be an adverse movement from the point of view of food buyers - the agricultural labourer class as well as the small farmer and the urban working classes. It can be argued that the favourable movement in the terms of trade in India has gone in general to accentuate inequalities - notwithstanding the argument that it should help to reduce disparities between the urban and the rural areas of these countries.

Pakistan: As has been noted earlier, income distribution in Pakistan seems to have improved during the 1960s;[30/] and again, this experience seems to be largely related to the type of agricultural growth which obtained in that period.

Agricultural growth in the 1960s in Pakistan, according to the study by Norman L. Hicks, was accompanied by a rise in real wages of agricultural workers as well as employment; in this respect, its experience seems to differ crucially from that of India. Such a rise in the real incomes of agricultural labourers seem to have had several other interesting consequences which all tended to reduce poverty and inequalities in income. First, it tended to reduce the disparities between the urban and the rural areas. Second, it

/had

27/ See Ashok Mitra, 1976, for a stimulating discussion on this.

28/ See, Wilfred Beckerman, 1977, for an interesting application of this idea in the context of the measurement and comparison of inequalities across nations.

29/ See, Ashok Mitra, 1976.

30/ See, Norman L. Hicks, 1978.

had a positive impact on the wages of workers in the informal urban sector, who tend to be the most depressed groups in the urban areas. As a result, the inequalities within the urban areas also tended to decline. The question, then, is: what helped Pakistan to have this different experience in the 1960s?

The real incomes of the agricultural workers seem to have increased partly because mechanization was held incheck through public policy; as the author of this study says, "most importantly perhaps, the increased output did not come about through large scale mechanization. Although imports of tractors, and to a limited extent, mechanical threshers, were permitted to increase each year, the spread of farm mechanization was held in check by the government's import control policies. Thus the increased productive capacity of land produced a significant increase in the demand for labour."

Apart from this arrest of mechanization, the experience of Pakistan must have been differently shaped from that of India - say from that of the neighbouring Punjab in India - in that the extent of surplus labour was much less in Pakistan than in India. It is noted, for example, that there was considerable migration of seasonal labour to the state of Punjab in India from the neighbouring provinces which may weaken the bargaining power of the workers there,[31/] unlike in Pakistan where such cushion of surplus labour may not have been equally available where growth was taking place.

It can be argued, then, that if the contrasting experiences between India and Pakistan bring out one lesson, it is this; it is very crucial whether growth is occuring under conditions of surplus labour and whether there is any public policy to arrest mechanization or not when the real wage rates tend to show a rise.

VII. THE NON-AGRICULTURAL SECTORS

While the character of growth in the agricultural sector largely explains the experience with regard to the changes in inequality and poverty in rural areas, the character of industrial growth was not of a type that would compensate for this.

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31/ See, M. Lipton 1978, for example, who says ".... hundreds of thousands of poor labourers in India have moved seasonally, to share the gains from HYVs in the Punjab, Haryana and Western Uttarpradesh...." (p. 332). Lipton believes that this has led to smaller increases in real wages, which in turn induced smaller degree of mechanization; he interprets migration to have had a favourable consequence in terms of regional disparities.

A. INDIA

(a) The growth rate of industrial output had been decelerating in India since about the mid-sixties, which coincides with the period of the Green Revolution. While the growth rate of industrial output was in the range of 7 to 9 per cent per year in the period 1955/1965. It came down to about 4 per cent a year in the subsequent period 1965 to 1976.[32/] Coupled with this, the growth rate of employment had not only been consistently lower than the growth rate of output, but it had also declined much more dramatically. While the growth rate or employment in the manufacturing sector was about 6 per cent a year during 1960/61 to 1965/66, it came down to 1.6 per cent a year in the period 1965/66 to 1976/77. These facts suggest that: (i) there has been a general fall in employment per unit of output, and (ii) this seems to be particularly more marked in the recent years.[33/] One would expect such trends to be associated with adverse movements in the share of wages in the value added and a rise in unemployment in the urban areas.

(b) The evidence on the movement in the real wages of industrial workers is not clear; on balance one might say that they were either stagnant or declined slightly;[34/] there is also some direct evidence to suggest that the share of wages in the value-added of industry had been falling.[35/]

(c) There is much less dispute regarding the rise in unemployment in urban areas.
The number of applicants on the live register of employment exchanges show that they had increased from 2.6 million in 1965 to 9.8 million in 1976.[36/] Even if some applicants had registered themselves more than once, and even if some of them were already in a state of employment, these figures could be taken as a rough indication of the magnitude of change in unemployment. There is, after all, the offsetting possibility that several unemployed, particularly the illiterates among them may not have registered at all.

The evidence on the rise in the unemployed is significant not only in the direct sense that there were so many without an obvious means of livelihood; but it also implies that, insofar as they live off their friends

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32/ See, S.L. Shetty, 1978.
33/ Ibid.
34/ See B.K. Madan, 1976; and also B. Sau, 1977, which reviews Madan's findings.
35/ See, S.L. Shetty, 1973.
36/ See, S.L. Shetty, 1978.

or relatives, any changes in the incomes of the "friends or relatives" has to be deflated to that extent insofar as changes in the consumption standards are concerned.

All these facts indicate that there was no redeeming feature in the urban situation compared to the rural situation; they indicate a rise in the degree of inequality as well as a rise in the proportion of people in poverty.

Unfortunately, the trends in fiscal policy have not been of a type that would be corrective of this. There are at least two features worth nothing in this context: (i) first, there is evidence that public subsidies have become increasingly important for industry; these take various forms - export subsidies, investment rebates, grants or long-term loans to sick mills, etc.; it is not clear whether they had been more generative of employment than an alternative use of the same funds. Insofar as these public subsidies aim to keep up industry by keeping up their profitability, one would expect that these funds go to boost up the share of profits. Such an outcome, as we shall see later, is detrimental to employment promotion. (ii) Second, the reallocation of public revenues via the Central Budgetary transfers, have not been sufficiently progressive enough to overcome the regressive bias implied in the flows of institutional finance between regions in India.[37/] A study which looks at this question concluded that, "(a) interstate distribution of institutional finance had a very pronounced regressive bias against low income states; (b) this bias operated in favour of the high income states; (c) because of this, the bias in the interstate distribution of budgetary transfers in favour of the middle income states, as a group is wiped out, so that the over-all inter-state distribution of total finance can be seen to have operated clearly to the benefit of high income states " (Gulati, I.S., and George, K.K., 1978, p. 1401).

The significance of this evidence on the over-all regressive nature of the flows of public transfers and institutional finance across regions in India is twofold: first, the pattern of flows in institutional finance can be taken to indicate the pattern of growth in non-agricultural activity - industry and commerce; and insofar as they indicate that the flows of finance were biased in favour of the high per capita income states, the growth of non-agricultural activity was of a type which accentuate inequalities further. Second, insofar as the widening of regional inequalities tends to widen inequalities in

/personal

37/ See Iqbal S. Gulati and K.K. George, 1978.

personal income and accentuate poverty, the regional dimension is of direct significance. We had argued earlier how the fact that agricultural growth was concentrated not only class-wise, but region-wise as well, had a bearing on the extent of inequalities and poverty. The regressive nature of the public transfers together with institutional credit, region-wise, can be, therefore, taken to have contributed to the growth of inequalities and poverty in India.

But what explains these features? This is too large a theme, perhaps, to permit us an analysis of it here; but some possible explanations may be noted. First, it can be argued that the very nature of agricultural growth in India was responsible for the deceleration in industry and stagnancy in real wages. The class-wise and the region-wise concentration of agricultural growth had enabled these groups to bargain increased holding power in the market and even pressurize the state to tilt the terms of trade in their own favour; this resulted in a massive inflation of wage goods' prices which meant that: (a) the rate of increase in the real public expenditure and investment came down; (b) private investment in industry decelerated; (c) demand for essential industrial consumer goods like cloth had declined as the low income populations had to accomodate for the rises in the prices of food. As the industrial activity slackened, public finance and bank credit came to be increasingly employed for short term bailing out operations, tying up credit for such unproductive uses as the holding of involuntary stocks.[38/] Indeed, the decline in the demand for food itself - as a result of impoverishment - had been such public finance and bank credit came to be increasingly tied up to the involuntarily accumulated food stocks.[39/]

Second, as had been noted earlier, it is not clear that the fiscal policy had been of a type where growth of employment in the industrial sector had been promoted; the fiscal incentives to promote investment or exports could be said to have gone to boost up the share of profit in the value added, making it more difficult for employment to expand (a more rapid expansion of employment, at a given growth rate of output, would imply a larger share of wages in the value added).

In the ultimate analysis, therefore, the experience in the non-agricultural sectors could also be understood in terms of what happened in the agricultural sector and fiscal policy.

/B.

38/ An explanation along these lines is offered in P. Patnaik and S.K. Rao, 1977.

39/ See, S.K. Rao, 1978; for a critical review of literature on the alternative explanations for industrial stagnation, see Deepak Nayyar, 1978.

B. REPUBLIC OF KOREA

In looking at the question of poverty and inequality, it is often though that Korea presents a different experience. It is interesting, therefore, to examine what enabled it to have a more positive experience than countries like India.

According to a World Bank study, the per cent of people below the poverty line was only 10 per cent in 1974 compared to 40 per cent in Malaysia and the Philippines, and 55 per cent in Indonesia (the figures relate to 1975 in the case of the latter countries).[40/] Korea, thus, seems to have very low degree of poverty. What is not clear from the available information, however, is whether inequalities in the relative sense had declined; the evidence seems to be much more positive in regard to the decline in poverty rather than inequalities as such.[41/] We may, therefore, consider Korea as an example where inequalities may not have increased while the extent of poverty certainly declined.

The decline in poverty in Korea seems to be a result of the following features of its growth:

(a) The growth of income in Korea was mainly associated with the growth of labour intensive manufacturing for export; Korea enjoyed particularly good export markets and in commodities like textiles and electronics where highly labour intensive methods were employed; as a result, the growth of employment in the manufacturing sector was at a rate of 10.7 per cent a year between 1963 and 1975. This rapid growth in the manufacturing employment has had several interesting consequences: first, it pulled up the over-all rate of growth of employment to 3.7 per cent a year, a rate higher than the rate of growth of labour force. As a result, the unemployed fell both in absolute numbers and as percentage of the labour force. Second, there has been a shift of population from the rural areas to urban areas. The percentage of employed persons in agriculture fell from 63 per cent in 1963 to 46 per cent by 1975, thus, perhaps reducing underemployment and unemployment in the agricultural sector considerably.

The rapid rise in employment, particularly because of growth in manufacturing, has resulted in a situation where workers could bargain for

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40/ See Parvez Hasan, 1978.

41/ See D.C. Rao, 1978. The rest of the argument on Korea is based on this study.

higher wages - the employers would have had to offer higher wages to attract labour. The real wage rates were estimated to have increased at about 7 per cent a year in this period, reducing poverty, if not necessarily inequalities.

This favourable feature, which was mainly a result of the near full employment situation generated by the rapid growth in the manufacturing employment, was supplemented by the somewhat more egalitarian distribution of landholdings in Korea following the initial land reforms. The number of land holdings over 3.0 hectares were few; most of the land holdings were of the size between 0.5 hectare and 1.5 hectares (see table 6); as result, whatever agricultural growth there was, was distributed in a more egalitarian manner than in a country like India. The terms of trade, which the government tilted in favour of agriculture by heavily subsidising inputs and buying at higher producer prices, did not also result in increased poverty because of the structure of land holdings; (even though, even here, it is noted that the very small farmers gained much less than the bigger farmers from the tilt in the terms of trade).

Table 6. Farm size distribution, 1968 and 1974
(percentage of farm households)

	1968	1974
Landless	2.2	4.7
Under 0.5 ha	33.2	28.3
0.5 to 1.0 ha	31.8	34.0
1.0 to 1.5 ha	17.6	18.3
1.5 to 2.0 ha	8.4	8.2
2.0 to 3.0 ha	5.2	4.9
Over 3.0 ha	1.6	1.6
	100.0	100.0

Source: Ministry of Agriculture and Fisheries, Yearbook of Agriculture and Forestry Statistics (1975). Reproduced from D.C. Rao, 1978.

The favourable experience of Korea, then, is crucially related to two features: the rapid growth in manufacturing employment, creating a near full employment situation, enabling rises in real wages of workers; and the less unequal distribution of land holdings.

/VIII.

VIII. THE DEMOGRAPHIC DIMENSION

An interesting facet of the development experience that is becoming increasingly evident is the relationship between improvements in the mortality and literacy rates on the one hand, and fertility rates on the other: this relationship could be significant enough for fertility rates to decline more than proportionately to the declines in the mortality rates so that the natural rate of growth of population is itself reduced.

A recent cross country regression analysis by David Morawetz (1978) found that (a) the mortality rate is significantly related to fertility, and it seems to be the case that the relationship is much more significant when mortality rates are considered in conjunction with literacy rate: the combined effect, or the inter-action effect, is positive: (b) "Regressions in which mortality and education are lagged explain slightly more of the variation in fertility than those in which the current ... values of mortality and fertility appear..."; and, very interestingly, (c) the income distribution is found to be significantly related to fertility rates - i.e. fertility is lower where income distribution is better.

These results go to confirm that there is a close interaction between the reduction of inequalities and poverty on the one hand and population growth on the other hand as a lower rate of fertility is crucially associated with better age-composition, it leads to smaller dependency ratios, improving the chances of consumption for the earner.

The above findings are corroborated in the experience of Kerala where it is recorded that fertility rates had fallen significantly since about the mid-1960s; this reduction in fertility is explained by some scholars in terms of the reduced infant mortality rate together with the comparitively high literacy rates in Kerala (see United Nations, 1975). The demographic experience in several East Asian countries is also viewed in this light.

The significance of these findings is that fertility is far less an independent variable, mainly determined by cultural prejudices or simply a result of passive behaviour. A society which is in general developing in such a way that the masses of its population enjoy better living standards through time would not find its efforts frustrated via the swamping effect of a higher population growth rate.

/IX.

IX. POLICIES

One clear lessen that seems to emerge from our quick survey of some of the issues affecting the degree of inequality and poverty in Asian countries is this: increases in employment are crucial, especially if they can bring the whole economy to near full employment situation; this would have the not only directly beneficial effect of reduced unemployment (and reduced number of dependents) but also would enable increases in real wages; in the absence of such an event, it is doubtful whether poverty can be reduced.

One stream of thinking, which sees this as an impossible task in the context of many Asian countries, seems to have opted for a policy of limited improvements by way of what are called 'target groups'; the idea is to identify some definite sections of the population - e.g. small farmers - and design policies which would relate to them directly.[42/] There are, however, several problems associated with such a strategy: if the primary aim of the strategy is to identify groups of small asset holders and undertake policies which would improve the productivity of those assets, it leaves out significant sections of population who are without any assets to start with; a policy which leaves out wage earners would have limited impact in terms of reduction in poverty. Second, policies which are designed to work via improved productivity of assets may easily be diverted to benefit the large asset owner as against the small asset owner.

Indeed, the experience of India seems to warrant such a conclusion. As one writer puts it: "Concurrently with the pursuit of policies which have tilted the gains of development in favour of the rich, an attempt has been made during the past decade or so to offer solutions to the problems of poverty among the weaker sections - small and marginal farmers, agricultural labourers and others - isolated from the overall developmental programmes..... A critical review of these programmes has concluded that 'it is now recognised that even in 1975/76, after their full implementation, the coverage and impact of these schemes has been rather meagre.' What is more, as Dantawala has emphasized, 'there is a widely shared view that most of the benefits under the schemes have been diverted and appropriated by better off farmers with political influence. From this a general conclusion is drawn that in the absence of radical change in property relations and socio-political power structure, such reformist measures ... will make little impact on the conditions of the

/rural

42/ See, in this context, Hollis Chenery, et al, 1974.

rural poor and in fact tend to be unproductive and as such add to the inflationary pressure in the economy'" (Shetty, S.L., 1978).[43/]

There is then a question of how to promote employment rapidly. Obviously in countries where there may be a surplus capacity in the wage goods sector, it may be easier to design a policy which could promote employment through larger public expenditure - even though, even here, there may be problems which may be difficult to overcome. A discussion of this would be much beyond the scope of this paper, but we would consider one particular proposal made in this context - viz., promoting employment through labour intensity of technique - and discuss some of the problems involved.

X. PROMOTING EMPLOYMENT THROUGH LABOUR INTENSITY OF TECHNIQUE

It is often argued that employment could be promoted by shifting the balance of incentives in favour of adopting a more labour intensive technique of production on in several of the Asian countries. In what follows we look at some of the implications of pursuing such a policy, particularly whether employment can be promoted without causing an inflation in the prices of wage goods.[44/]

To facilitate the argument, let us suppose that the economy is divided into three sectors: (a) a wage goods sector (W sector) which produces all goods consumed by the workers and by workers only; (b) a luxury consumption goods sector which produces all the consumption goods demanded by the capitalists, the employers (C sector); and (c) an investment goods sector which produces machines for all the three sectors (I sector). It is assumed that workers spend all their income on wage goods and capitalists on luxury consumption and investment goods. In equilibrium, the output of the W sector is equal to the total wage bill, and the outputs of the C and I sectors are equal to total profits. Further suppose, that the demand for C goods by the capitalists is inelastic with respect to changes in profits; it declines only when profits fall short of the accustomed level of consumption of those goods and only to that extent; otherwise a reduction in profits will be immediately reflected in a corresponding fall in the output of investment goods.

The three sectors have a given amount of machine stock which is not shiftable between sectors. Within each sector, the machine stock can be used with varying number of workers, subject to, of course, diminishing returns to labour use.

/Let

43/ See p. 211; the reference is to Dantwala, 1976.

44/ See S.K. Rao and Amal Sanyal, 1978; the argument in this sector is almost a repetition of what is contained there.

Let us now suppose that the government wishes to promote employment by altering the balance of market costs in favour of employing more labour. This it may do either by giving a wage subsidy or by withdrawing various investment allowances - allowing the purchase of machinery at an over valued exchange rate, tax allowances on investment etc. We further assume that there is no surplus of wage goods in the economy; this assumption is made to focus our attention on the possibilities for employment when the initial situation is one where there is no surplus of wage goods.

The implications of promoting employment via labour intensity of technique can be brought about by comparing two equilibrium situations - the situations before and after the higher labour intensity is induced.

In equilibrium, total wage bill is equal to the total output of the wage goods sector and that total profits are equal to the outputs of luxury consumption and the investment goods sectors, This follows from our earlier assumptions. This implies that the total wage bill in the C and I sectors is equal to the surplus of output in the wage goods sector - i.e. total output of the W sector minus the wage payments there would be what is available for payment to workers in the other sectors. There is thus a proportional relationship between the size of surplus in the W sector and the level of employment in the I and C sectors. This can be illustrated through a diagram (see Figure 1).

In the first quadrant of Figure 1, the vertical axis measures the total output and total wage payment in the W sector; the horizontal axis measures the total number of workers employed in the W sector. Because of given capital stock, the total output curve OAB rises at a diminishing rate as employment increases. OM, the total wage bill curve, rises at a constant rate as employment increases, as the real wage rate is assumed to be constant. Assuming that the capitalists maximise their profits, OE is the equilibrium level of employment in the wage goods sector, EA its total output, and AS the surplus that is available for wage payment in the other two sectors.

Along the downward direction of the fourth quadrant we can measure the employment in the other two sectors. Since each level of employment in the W sector releases a unique amount of surplus of wage goods for use elsewhere, at the given real wage rate the employment in the other two sectors is proportional to the gap between the output curve and the wage curve in the W sector. OPQ in the fourth quadrant shows the relationship between the level of employment in the W sector and the level of employment in the C and I sectors.

. . . /Figure 1.

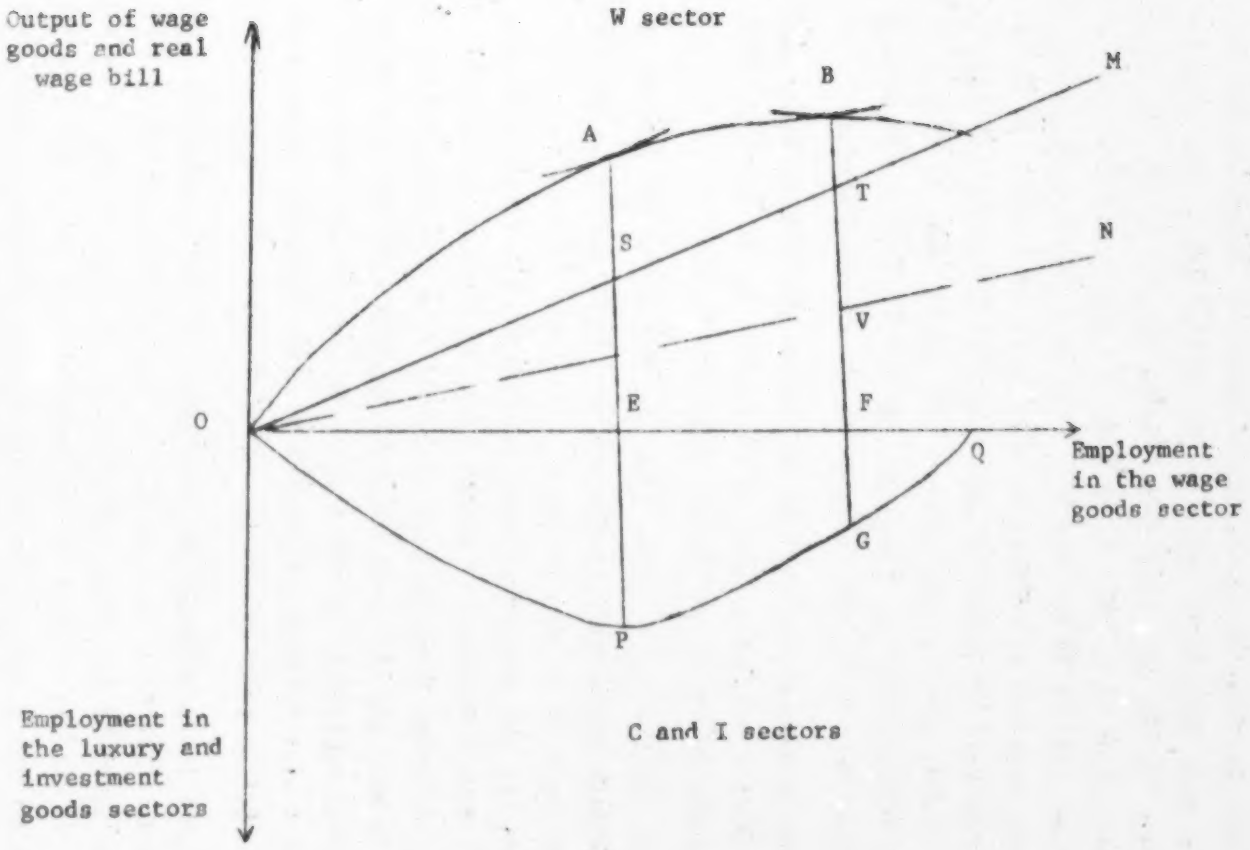
Output of wage goods and real wage bill
W sector
M
B
A
T
S
N
V
E
F
O
Q
Employment in the wage goods sector
G
P
Employment in the luxury and investment goods sectors
C and I sectors

Figure 1.

/The

The curve OPQ in the fourth quadrant shows that employment in the I and C sectors is maximum (at EP) when employment in the W sector is OE; for, at OE level of employment, the surplus of wage goods is maximum.

Imagine now that the government promises to subsidise the wage bill such that the wage bill curve faced by the capitalists in the W sector shifts from OM to ON. As the wage bill curve shifts from OM to ON, the profit maximising employment would be at OF; at OF level of employment the surplus of wage goods, however, will be BT and not BV; this is so because we assume that the real wage rate received by workers is unaltered; therefore, OF number of workers will have to be paid FT amount of wage goods, FV being the bit paid by capitalists and VT being paid by government; this would leave BT amount of surplus. Now BT being smaller than AS, the total employment outside the wage goods sector will be reduced from EP to FG, as shown in the fourth quadrant.

Since we assume that the capitalists do not reduce their consumption as profits fall, a declining level of employment in the non-wage goods sector implies that the output of investment goods would fall.

It is interesting to note, however, that while the surplus in wage goods sector constrains employment outside the wage goods sector to the level FG, the system cannot come to an equilibrium at this level without some form of government intervention. At the subsidised wage rate facing the firms, both the I and C sectors will have a tendency to expand their employment and output. The government cannot subsidise this expanded wage bill in a non-inflationary way. Its commitment to hold the real wage constant implies that the government has to limit the total employment in the I and C sectors to the level FG in one manner or the other - e.g. taxation of profits in these sectors. In any case some taxation of profits would be involved to meet the cost of wage subsidy.

Suppose the government has undertaken all these necessary steps; the final outcome, then, would be: a) a rise in employment in the economy as a whole; this is unambiguously so, as is indicated by the rise in the total output of the wage goods sector; a fall in the employment in the I and C sectors together; this implies a fall in the output of these sectors, (though not necessarily proportionately); this in turn implies a fall in the amount of profit.

It is thus clear that under the assumptions we have made, promoting employment via greater labour intensity of technique would call for a reduction of profits. If this is not accomplished through public policy, such a policy could easily result in inflation.

The question of the labour intensity of technique is, therefore, closely tied up to the willingness and the ability of the governments to alter the share as well as the size of profits going to capitalists in their countries. It is not simply and purely a technical question.

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